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REMARKS

Status of the Claims

Claims 1-32 were rejected in the outstanding office action.

After the amendment herein, claims 1-30 are pending.

Claims 1, 11, 16, 19, 26 and 30 are amended herein.

Claims 31 and 32 are canceled herein.

Rejection Under 35 U.S.C. § 112

Claim 11 were rejected under 35 U.S.C. § 112 as indefinite for use of the claim language "substantially functionally unaltered." For examination purposes, the this claim language was interpreted as "functionally unaltered." Claim 11 is amended herein to place the claim language in accord with that interpretation. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection Under 35 U.S.C. § 101

Claims 30-32 were rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter. Claims 31 and 32 are canceled herein. Claim 30 is amended to recite a statutory claims. Claim 30 recites a computer-readable medium encoded with a computer program for performing a method as claimed in claim 1. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection Under 35 U.S.C. § 102

Claims 1-25 and 27-32 were rejected under 35 U.S.C. § 102(e) as anticipated by US Patent No 6,389,590 (Miller). Claim 26 was rejected under 35 U.S.C. § 103(a) as obvious over Miller in view of US Patent No 5,668,999 (Gosling). The office action alleges that Miller discloses a method of distributing an object-oriented computer program comprising: (a) translating the program bytecode into machine independent virtual processor code which uses an

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instruction set of a virtual processor; (column 1, lines 10-15, column 1, lines 15-20, column 6, lines 1-10) and (b) transmitting the virtual processor code from a server to a client device; (column 1, lines 15-20, column 6, lines 1-10 and Figure 2).

The applicant respectfully traverses the rejection and submits that the claims, as amended, are distinguished from and therefore patentable over the cited references. In the amended claims, claim 1 has been amended to recite that the virtual processor code is transmitted from a server to a client device and translated into native code which uses an instruction set of a physical processor of the client device. A consequential amendment is also made to claims 16 and 17. Support for such amendment in found in the specification at page 6, line 1 – page 7, line 4 and page 2 lines 4-16.

The method recited by claim 1 is distinguishable from Miller, which fails to teach or suggest each and every step of claim 1. Claim 1 as originally filed and currently pending recites that the "machine independent virtual processor code [...] uses an instruction set of a virtual processor." Contrary to the assertion of the office action, the cited passages of Miller (column 1, lines 10 to 15; column 1, lines 15 to 20; column 6, lines 1 to 10) do not disclose a virtual processor code which *uses an instruction set of a virtual processor*. The cited passages merely disclose the use of an intermediate language (first passage cited: column 1, lines 10 to 15) which is platform independent (second passage cited: column 1, lines 15 to 20) and can be compiled in a number of ways into native code (third passage cited: column 6, lines 1 to 10). However, none of these passages refers to a virtual processor or its instruction set.

The distinction of an intermediate language using "an instruction set of a virtual processor" is not a mere linguistic distinction, since the disclosed and claim invention relies on the fact that the instruction set of the virtual processor code resembles the instruction set of most physical processors (see page 11, lines 17 and 18 of the application as filed). In the preferred embodiment, virtual processor code is registered based while byte code (another type of an intermediate language) is stack based (see the specification at page 11, second paragraph, lines 8-20 of the application as filed). Typically, byte code manipulates objects and arrays where virtual processor code directly acts on memory locations. Since the instruction set used by the virtual processor code resembles that of most physical processors, the native complier can be much smaller than, for instance, a Java Virtual Machine for interpreting byte code and can be run on

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client devices having only a small execution environment.

It is appreciated that Miller does not relate to byte code but to an intermediate language with indefinite sized variables. However, Miller is silent on the types of instructions used by the intermediate level language. Miller thus fails to anticipate independent claim 1 which recites that the virtual processor code uses an instruction set of a virtual processor. Moreover, Miller relates to intermediate language which can handle indefinite-sized variables. As a result, Miller requires further processing on compilation into native language (see column 7, line 23 to column 8, line 11). Thus, Miller teaches away from the object of the present invention which is to provide a intermediate compilation step into virtual processor code which minimizes the processing requirements of compilation into native code because it uses the instruction set of a virtual processor. Accordingly, the applicant respectfully submits that Miller fails to disclose, teach or suggest each and every limitation of the claimed invention. Withdrawal of the rejection of and allowance of claim 1 is therefore respectfully requested.

Claims 2-18 and 26-30 depend from independent claim 1 and thus incorporate the limitations of claim 1. Applicant submits that the remarks directed to claim 1 above also apply to these claims in addition to any separate bases for patentability based on the claim language of each dependent claim. Thus, based at least on claim dependency, it is respectfully submitted that claims 2-18 and 26-30 are patentable over the cited reference. Accordingly, withdrawal of this rejection and allowance of claims 2-18 and 26-30 is respectfully requested. Applicant also notes a minor grammatical correction to claim 26.

Amended claim 19 recites a distributed computer system comprising, in part, a server including a store for storing virtual processor code, said code being a machine-independent representation of an object oriented computer program using an instruction set of a virtual processor, ... and a native translator arranged to translate the virtual processor code into native code which uses the instruction set of the respective client processor. Accordingly, the applicant reiterates the remarks above concerning Miller and submits that claim 19 is patentable over Miller for those same reasons detailed above. That is, the Applicant traverses the rejection and respectfully submits that Miller fails to teach or suggest each and every step of the claimed invention of claim 1. Applicant submits that the claim 1 is distinguishable from and allowable over Miller and thus requests withdrawal of this rejection and allowance of claim 1.
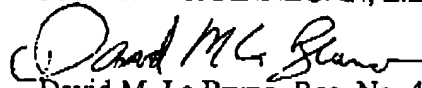
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Claims 20-25 depend from independent claim 19 and thus incorporate the limitations of claim 19. Applicant submits that the remarks directed to claim 19 above also apply to these claims in addition to any separate bases for patentability based on the claim language of each dependent claim. Thus, based at least on claim dependency, it is respectfully submitted that claims 20-25 are patentable over the cited reference. Accordingly, withdrawal of this rejection and allowance of claims 20-25 is respectfully requested.

Conclusion

Based on the foregoing remarks, it is respectfully submitted that the all of the claims as submitted and pending are patentable and in condition for allowance. Reconsideration of the application and withdrawal of the rejections are respectfully requested.

In the event that a telephone conference would facilitate examination in any way, the Examiner is invited to contact the undersigned representative at the number provided.

Respectfully submitted,
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